



The Impact of Media on Early Child Development: What Parents Need to Know

A Collaboration between *Common Sense Media* and *Parents Place*

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Overview

- Is screen time harmful?
 - Babies: under age 2
 - 2 and up
 - Quality time
 - Attention problems
 - Violence
 - Obesity
 - Language development
- Is screen time helpful?
- Interactive/Digital Media
- Healthy media tips and strategies for parents





The leap from 2 to 3 years



Child development experts agree that children under age 2 should be treated as a distinct group with special needs and vulnerabilities related to media; special policies should be developed for this group.





Babies and Screen Time

American Academy of Pediatrics discouraged screen time for children under age 2 years (1999).

The recommendation that children under 2 have no screen time was reaffirmed in an updated statement (2011).



Brain Development



From birth to age 2 years, children's brains triple in size

- Production of necessary -- & destruction of unnecessary -- neural architecture occurs primarily in the first 18-24 months



Babies and Screen Time

- Screen exposure for children under age 2 *may* slow learning and interfere with crucial wiring in babies' brains
 - With every 1 hour/day that infants spent watching baby videos/DVDs, they learned 6-8 fewer new vocabulary words & scored 10 % lower on language skills



Babies and Screen Time

- Children under 2 learn through *three dimensional exploration*: social interaction with caregivers, manipulating objects, movement and play



Media and *Quality Time*

- Media Exposure:
 - *No effect on children's time spent in active play*
 - *Children in heavy media households spent less time reading and being read to; lower likelihood of being able to read*
 - *Decrease creative play*
 - *Decrease time spent with parents in activities other than television*



PLAY

“Play is not an extravagance; play is not a luxury. Play is a necessity. Play is basic to learning.”



Hirsh-Pasek and Golinkoff,
Einstein Never Used Flashcards, 2004



- **Unstructured playtime:**
 - American Academy of Pediatrics issued a clinical report stressing the importance of time to play
 - Develops problem-solving & reasoning skills
 - Gives sense of power and control
 - Fosters innovation and creativity
- **When TV is on as background media playtime decreases**
 - Shorter play episodes
 - Greater distraction; children bouncing from one toy/activity to another



Parent-Child Interaction

- When parents get on the floor and play jointly with children, the maturity level of a child's play automatically increases.
- Reading to children fosters cognitive and language development.
- When TV is on there is a decrease in the amount of time parents interact with children, and in the quality of interaction.



Media and Attention

- 2004 study of preschoolers found that for each hour of TV watched per day, children had a 10% higher chance of developing attention problems at age 7:
 - restlessness
 - poor concentration
 - impulsiveness



Media and Attention

- 2010 study found that children ages 2 ½ to 4 ½ years who spend more than 2 hours per day in front of a screen (TV, computer, smart phone, iPad, PlayStation) are a greater risk of *attention, learning, social and behavior problems*.



Media and Aggression

- Viewing violent media, including cartoons, super hero movies and other “children’s” programming is linked to behavioral and academic problems:
 - For every hour per day preschool boys spent watching violent TV, they had 3x the risk of developing behavioral problems
 - Among girls, viewing violent programs in preschool linked to lower grades through HS
 - Predicts aggressive behavior for both males and females in adulthood
 - Reducing exposure to violent media decreases children’s aggression



Media Use and Obesity

- 19% of American children ages 6-11 are obese, up from 4% in the 1960s.
- 14 % of children age 2-5 are overweight
Centers for Disease Control, 2011
- Correlation between child's weight and having a TV in the bedroom
NY State Dept. of Health, 2002
- The more TV a toddler watched, the greater likelihood that he or she would consume more soda and junk food and have a higher than average body mass up to 7 years later
University of Montreal, 2010



Media Use and Obesity

- Studies have **not** found support for the belief that active play-time is negatively related to TV viewing. *Pediatrics* journal, 2006
- Studies have **not** found that children eat more while watching TV. *Pennsylvania State University*, 2006
- TV Advertisements influence what children ages 2-5 eat. *Institute of Medicine report*, 2006
 - *The United Kingdom's regulatory agency has barred the broadcast of commercials for high-fat and sugary foods during children's programs, an approach being recommended by the American Academy of Pediatrics to US Congress.*



Advertising in Children's Media

- Up to age 4 or 5 children can't distinguish commercial content from noncommercial content.
- Children under 7 or 8 don't realize that the purpose of commercials is to sell products. While TV has separate commercials, the internet doesn't.

Dittmann, *Americal Psychological Association*, 2004



TV & Language Development: Background

- Background TV noise can interfere with babies and toddlers' ability to learn language: difficulty differentiating sounds, attaching specific sounds to meanings.
 - Correlation with delayed language development
- Studies have found that a child's cognitive growth and language skills are tied to level of chaos in the home: lack of routines, multiple people coming and going, high stress, backdrop of constant noise including from TV.
 - Reading deficits, speech perception problems, difficulty paying attention, poor retention of new words and meanings, difficulties distinguishing similar sounds



TV & Language Development: Foreground

- Children who watch the most TV perform worse in grammar tests.
- The language development of children under age 2 may be negatively impacted by viewing even educational programs such as Sesame Street.

Naigles and Mayeux, *University of Connecticut, 2001*; Linebarger, Walker, *American Behavioral Science, 2005*



Can Screen Time Help My Child?

Educational Media

- In 2009 the Walt Disney Company began offering refunds for Baby Einstein products, based on evidence that the products were not educational.
- Children under age 2 are unlikely to benefit from “educational” media.
 - Pictorial competence
 - Video deficit
 - Narrative deficit

From *Into the Minds of Babes*, Lisa Guernsey, 2007



Educational Media

- Shift in understanding around 2 ½
 - Understand simple stories
 - Recognize time passing
 - Video and narrative deficits resolve





- Television programs can have social and educational benefits.
- Moderate evidence that educational TV during preschool years is positively linked with various measures of academic achievement even 10 years later.
- However this research relates to specific types of programs and it applies to children 3 and above. For younger children, the reverse may be true.



Kirkorian et al, *The Future of Children*, 2008



Educational Media: Language

- Programs like *Dora*, *Blue's Clues*, *Dragontales*, *Arthur* and *Clifford* have been associated with accelerated language growth.
- However experts still caution that electronic media alone cannot teach someone language (or a second language) including how to connect verbs, nouns and prepositions, communicate ideas through speech.

Linebarger & Walker, *American Behavioral Scientist*, 2005; Rice, Huston, Truglio and Wright, *Developmental Psychology*, 1990



Educational Media: Vocabulary

- Some evidence that educational TV -- *Sesame Street*, *Blue's Clues*, *Dora*, *Arthur* and *Clifford* -- may improve vocabulary for children ages 3-5
- However experts agree that the amount of talking in the home makes a more significant difference in children's vocabulary growth and IQ

Linebarger & Walker, *American Behavioral Scientist*, 2005; Rice, Huston, Truglio and Wright, *Developmental Psychology*, 1990



Educational Media: School Readiness & Performance

- Some studies found that preschoolers who viewed educational TV programs have higher grades and read more books in high school.
- Educational TV viewing predicted school readiness among low to moderate income children.

Anderson et. al, *Monographs of the Society for Research in Child Development*, 2001



Educational Media: Social and Emotional Skills

- Some evidence that viewing certain educational programs -- *Mister Rogers*, *Sesame Street*, *Barney*, and *Dragon Tales* -- is correlated with improved cooperation, organization, sharing, choosing tasks that are challenging, and flexibility in play.
- Researchers agree that pretend play has even greater connection to self-regulation, social maturity, impulse control and other pro-social behaviors.

From *Into the Minds of Babes*, Lisa Guernsey, 2007



- To help preschool-aged children learn programs must be:

- Slow
- Linear (rather than cuts and transitions)
- Repetitive
- Interactive
- Dialogue and action must be linked
- Characters must do something that illustrates what the scene is about
- Educational lessons must be tightly woven into story line of the show
- Parental interaction increases learning





Interactive & Digital Media

Not recommended for children under two.

Little research on the impact of digital media on young children.





Interactive & Digital Media

- 39% of children 2-4, and 52% ages 5-8 have used an iPad, iPhone or similar touch-screen device to play games, watch videos or use other apps.



Interactive & Digital Media

Similarities to other activities:

- TV: when used to view videos
 - *Subject to the same guidelines*
- Books: E-books with no interactive component; narration is turned off and parent reads



Interactive & Digital Media

Features of digital media:

- Interactive
 - Engaging
 - *Addictive?*
- Portable
 - More difficult to set limits, boundaries



Interactive & Digital Media

Research:

- Some indication that children can learn from educational digital media:
 - The Joan Ganz Cooney Center at Sesame Workshop found children 3- to 7-years-old improved on a vocabulary test by more than 30% after using an educational app called "Martha Speaks" on the iPod Touch



Tips & strategies for healthy media use

Quantity

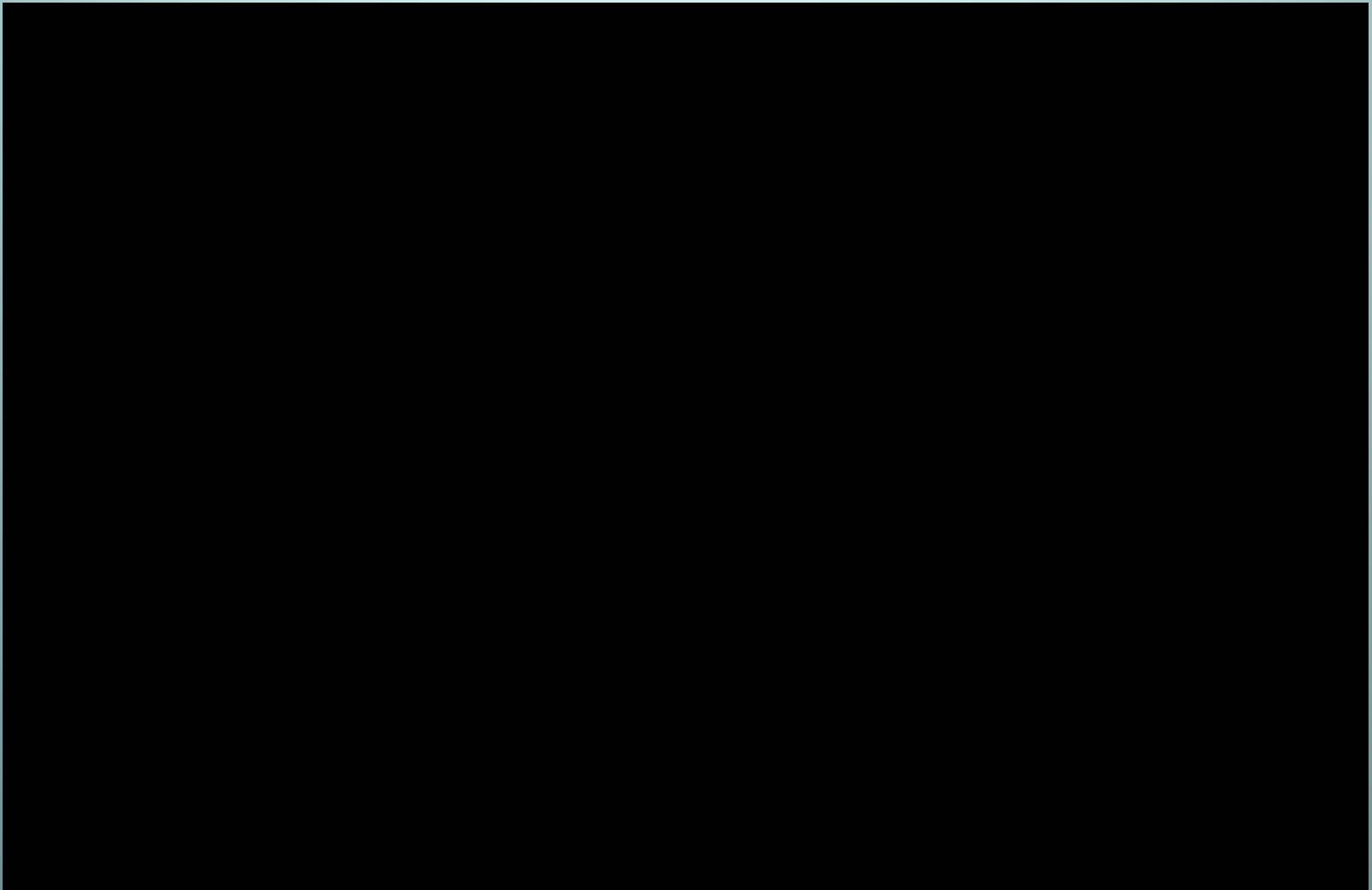
Quality

Context

Control



Phone Applications





Quantity

Set Limits

- You are establishing rules, habits and structure for the rest of childhood.
- Recommend no more than 1-2 hours per day balanced with unplugged play.



Quality

Do your homework

- Test-drive what your child is playing and watching
- Look for media that has:
 - Educational value
 - Positive messages
 - Correct skill level
 - Non-jarring sounds and bright, stimulating colors
 - No violence/aggression
 - No commercial content/tie-ins



Context

Establish parameters. Ensure media use is:

- Scheduled, structured
- Not a substitute for soothing, distracting, childcare, or “real” education
- Facilitating (rather than detracting from) parent-child interaction



Control

Remain in charge of media use.

- Make a rule that your child must ask permission to turn on media.
- As kids get older, keep media out of their bedrooms.



Recommendations by age



Best Smart Phone Applications 2-3:

Pat the Bunny

I Love You Through and Through

Tales2Go

Sid's Science Fair

Brave Rooney

Pooh's Birthday Surprise

Peek-A-Zoo by Duck Duck Moose



Best Games/Toys for 2-3

Giggles Computer Funtime for Baby (under 3)

My First Story Reader

My Own Learning Leap

Power Touch Baby





Best SmartPhone Applications 3-4:

Montessori Letter Sounds

Numberlys

Eddy's Number Party

Harold and the Purple Crayon

Alphabytes

ABC Play

ABC Food

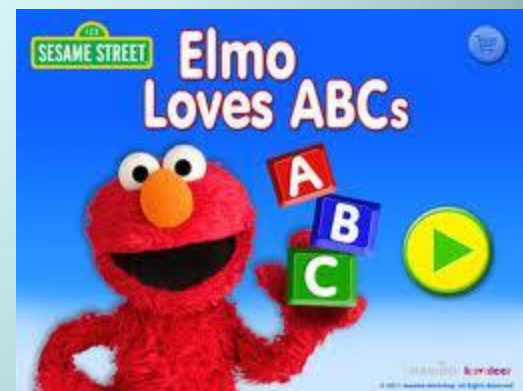
Dora's Cooking Club





Best Games for 3-4

Elmo Loves ABCs for iPad



LeapFrog Explorer Learning Game: Pet Pals
2: Best of Friends

Sesame Street: Once Upon a Monster

Sesame Street: Ready, Set, Grover

Ni Hao, Kai-Lan: New Year's Celebration

ItzaZoo

Everybody has a Brain





Best SmartPhone Applications 4-6:

DragonBox

Playful Minds Math

Love to Count by Pirate Trio

Feel Electric!

Memory Train





Best Games for Children 4-6

Animal Genius

Dora the Explorer

Itza Bitza

JumpStart 3D Virtual World

Leap Pad Learning System

Leapster **LEAPSTER**

Tag Reading System





Best Websites for children 4-6:

SesameStreet.org

KidRocket.org

NickJr

PBSkids.org

Ziggity Zoom

Arthur





Online & Virtual World Games for Children 4-6:

Mister Roger's Neighborhood

PoissonRouge

Pocoyo World (3+)

Club Penguin

Whyville

Webkinz Jr.





Kid-Safe Browser and Search Sites 5+:

Zoodles

Kido'z

Kidzui

KoLjr



Resources

Commonsensemedia.org
Netfamilynews.org
Netsmartzkids.org
Thatsnotcool.org
Isafe.org

Into the Minds of Babes: How Screen Time Affects Children Birth to Age Five, Lisa Guernsey, 2007

Talking back to Facebook, James Steyer, 2012

Cyber-Safe Kids, Cyber-Savvy Teens: Helping Young People Learn To Use the Internet Safely and Responsibly, Nancy Willard, 2007



Parents Place Programs & Services

1. Bullying & Cyber Bullying Prevention Training...
for Teachers, Parents, and Organizations
2. Counseling: individual, family, group

*...and we offer **over 50 workshops** for parents of children
of all ages in house and on location!*

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- **Ask us about adult, child, and family counseling.**
- **Attend a peer support group.**
- **Come to our drop-in play area with your child.**
- **Check out our child development and parenting resource library.**
- **Ask us to provide a speaker at your work site or at your child's childcare center or school.**
- **Sign up your child for our tutor/mentor program.**
- **Involve your teen in our community service programs.**